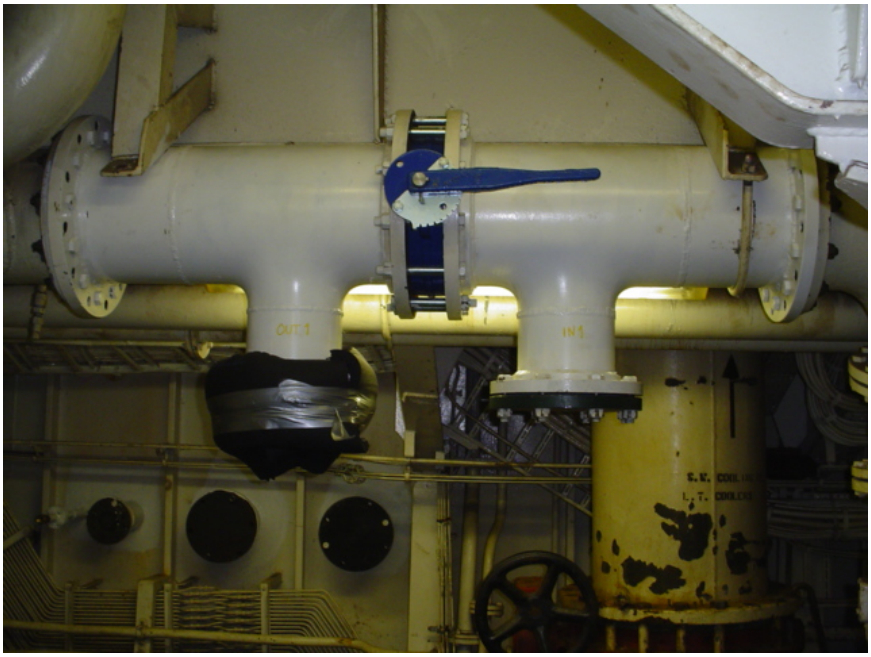
Ballast Water Testing - Vessel Modifications

Description of System

The *Cape Washington* and *Cape Wrath* have been modified by the installation of a testing spool into the discharge side of the ballast main to the ballast manifold to enable either a portion or the entirety of the ballast water passing through the system may be diverted to a testing skid for treatment and or testing of the ballast water. The testing spool is fitted in such a way as ballast may be transferred between tanks, to sea and from the sea using the testing skid.



This is a picture of the testing spool. The spool is fitted with valves, blanks and removable spools for use when a testing skid is installed onboard the vessel but all of which are easily removed if there is no testing equipment installed to eliminate clutter and hazards in the machinery spaces onboard the vessels.

Flow is directed out of the testing spool through two 8” flanged connections through piping and penetrations in the forward engine room bulkhead to a test skid manifold located in the #1 cargo deck, aft port corner. The manifold is fitted with four lines: one eight inch feed, one eight inch return, one four inch brine discharge and one 1 inch potable washdown line. The 4” brine return discharge is directly connected to the port side high engine room sea suction and will not interfere with Ballast Water transfer.

Manifold connections are located approximately 36” from the deck. There are 36” flexible couplings for each manifold connection except the 1” connection. There is a provide 100’ HD garden hose for connection to this line.

Power to the skid is provide by a breaker located approximately 18’ inboard of the manifold in the #1 cargo hold. Power service is provided by 200A 440 V power supply on an independent breaker.

Any additional power requirements must be met via Contractor supplied external power source. The ship is not capable of providing more than 200 A power for the testing requirements.

Power supply from the main switchboard is provided via a breaker in the engine control room.

Area of #1 cargo hold is sufficient for installation of any container skid-based testing equipment with adequate tie-downs for 20- or 40-foot containers.

Crew Support

The crew has offered basic support during normal working hours which are 0800 to 1600, Monday through Friday. Basic support shall include:

A. Operation of the ballast pump for ballast transfer.
B. Stability calculations for vessel safety during transfers.
C. Enabling of disabling power breakers on the main switchboards.